

CITATION OF THE NINETEENTH CENTURY SPECIMENS IN
THE HERBARIUM AT PERADENIYA

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There are some special problems connected with citations of the nineteenth century herbarium specimens at Peradeniya which can trap the unwary into embarrassing anachronistic errors. However, by bearing in mind the history of botanical collecting in Sri Lanka and also by avoiding unwarranted attribution of collectors to anonymous collections, anachronistic errors can be avoided.

Obviously no one has ever made collections in Sri Lanka before his arrival in Sri Lanka, nor after his death. Incontrovertible as these facts are, nevertheless a member of a world famous botanical institution who visited Sri Lanka under the aegis of the Flora of Ceylon project attributed at least one collection to Gardner before Gardner's arrival in Sri Lanka, and others to Gardner after Gardner's death, and attributed various collections to Thwaites after Thwaites' death. Others have made similar, though generally fewer, errors. These errors have arisen mainly as the result of some problems with the data on the herbarium sheets at Peradeniya of the "C.P." series established by Thwaites, plus lack of collectors' names on specimens collected during Trimen's era. On the back of the title page for Part I, 1858 of Thwaites' 'Enumeratio', at the end of a prefatory statement is this paragraph which explains the C.P. numbers:

"The numbers preceded by the letters C.P. (Ceylon Plants) attached to the several species in the 'Enumeratio', indicate those with which they are respectively marked in the Peradenia¹ Herbarium." This series was intended to be a standard set with only one taxon assigned to a given number, and ideally, only one number to a taxon. In the back of Thwaites' 'Enumeratio' on pages 451-468, 1864, there is a list of these numbers with page references to the citation of these C.P. numbers under the taxa which they exemplify. The series as enumerated runs from 1 through 3859. In the copy of Thwaites' 'Enumeratio' annotated by W. Ferguson there appears at the end of the list of C.P. numbers the following handwritten note: "For some of the C.P. Nos. following these see Wall's notes on ferns p. 11 Addenda ...". Following this Ferguson has written C.P. numbers in an incomplete series from 3923 to 4020 with an indication that there were additional numbers beyond these. (According to Jackson (1901, p. 64), Kew has numbers 1-3856.) This copy of Thwaites' 'Enumeratio' annotated by W. Ferguson is preserved in the library of the National Herbarium of Sri Lanka in the Royal Botanic Gardens, Peradeniya.

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¹ The change in spelling to the current "Peradeniya" was made in 1866 according to Thwaites in a letter of 13 Dec. 1866, preserved in the archives at the Kew Herbarium.

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Trimen (1882) in his obituary of Thwaites makes the following statement concerning the "C. P." series: "At the same time Thwaites worked indefatigably at forming a numbered series of Ceylon plants (new known as "C. P.") from the stores of unarranged specimens in the herbarium and those collected under his direction. Numerous sets of these series were made and widely distributed among the principal herbaria and museums in exchange....." Stockdale, Petch and Macmillan (1922, p. 30) make a similar statement probably based on Trimen's. By means of the CP numbers listed in Trimen (1885) it is possible to place the whole CP series after those listed in Thwaites 'Enumeratio': "'CP' refers to the distributed sets of dried specimens of Ceylon Plants. The numbers given here are the whole of those subsequent to the ones quoted in the 'Enumeratio' which terminated with CP 3860." (Trimen, 1885, p. iv). (The fact that Thwaites' list actually terminated with CP 3859 does not appreciably affect the usefulness of Trimen's list). Trimen (1893, part 1, p. viii) states regarding the C.P. numbers: "The herbarium at Peradeniya contains a very complete series, and the numbers quoted are always those in that collection, which must be regarded as the type series. Further support of the belief that Thwaites' types are at Peradeniya are the facts that (1) Thwaites carefully specified in his early publications of new taxa in Hooker's Journal of Botany and Kew Garden Miscellany (e.g., Thwaites, 1853 & 1856) C.P. numbers " in Herbario Peradeniensi," and (2) Thwaites remained in Ceylon until his death which indicates that he considered the island his head-quarters (Boulger, 1900, p. 377).

Study of the correspondence between Thwaites and Kew preserved in the archives at Kew might supply further information on the problem of Thwaites' intentions as regards what specimens are to be taken as typifying his taxa. The statement by Stafleu (1967, p. 469) that Thwaites' types are at Kew, was made, according to Stafleu's reply of 22 Nov. 1978 to Wheeler's query of 16 Nov. 1978, without being aware of Trimen's prior statement. As these C.P. numbers have been cited not only by Thwaites (1858-1864) in his 'Enumeratio' but also by Baillon, Etude General du Groupe des Euphorbiacees, 1858, Jean Mueller von Argau in his account of the Euphorbiaceae in DC. Prodrum, vol. 15, part 2, 1866, J.D. Hooker, Flora of British India, Trimen (1893-1900) in his Handbook, and in numerous other floras and monographs, it is essential that they be cited in the revised Flora of Ceylon currently under preparation under the aegis of the Flora of Ceylon Project.

However, it is imperative to be aware that while these were intended to be standard sets, they were sometimes mixed within one sheet, or at least under one number. Examination of Jean Mueller von Argau, J.D. Hooker, Trimen and others will confirm this statement for there are many cases in which they cite a C.P. number but qualify it as "p.p." Therefore the same C.P. number may represent different taxa in different herbaria.

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Often these C.P. numbers, when cited, are attributed to Thwaites as collector. In fact at both Kew and Geneva the labels of the C.P. numbers commonly bear Thwaites' name. However, at Peradeniya specimens in the C.P. series with labels are rare. Instead the C.P. numbers are written, usually in ink, in the far upper right hand corner and are specified as "C.P." followed by the number. The names of the taxa are written in black ink horizontally on the lower left margin. The handwriting of these names is quite legible and appears to be uniformly in the same hand. It certainly is not Thwaites' as shown by comparison with the handwriting in Thwaites' letters preserved in the archives at Kew. These names in the lower left were probably by the same amanuensis who served for a long period of years as all appear to be by the same hand. --- In lectotypifying Thwaites' taxa it is well to note that some C.P. sheets have the binomial in the lower left followed only by "Thw"., while others have "Thw., Enum." There is a possibility that sheets with the second type of labelling were collected after publication of the 'Enumeratio' and if so should not be first choice for lectotypes.

On some of the sheets at Peradeniya are jottings in light pencil, probably in Thwaites' hand, on the right-hand margin about 15 cm above the lower right corner, in which there may be recorded collectors, localities and dates. Unfortunately this is the area where the thumb is likely to rub when leafing through the sheets making identifications by comparison. Probably many of these jottings were scarcely legible even when originally written, and now, after as much as a century and a quarter of wear, many cannot be deciphered. Unfortunately there is often more than one, and even as many as six, localities given. Sometimes there are more localities than snippets. It is obvious in such cases that the geographical data are unreliable. It is quite possible that Thwaites used this method of keeping his records of the localities for the various collections combined under one C.P. number. Although collectors are given only occasionally in these pencilled jottings, Gardner does appear from time to time. The validity of these attributions is supported by the following paragraph from p. vii of the preface to Thwaites 'Enumeratio', 1864: "Dr. Wight, immediately on my arrival on the island, gave me his most valuable help in naming the numerous specimens I found in the herbarium, which had been collected by my predecessors, and principally by Dr. Gardner."

The unwary, reading these jottings, may combine them in a logical but erroneous fashion. Often there may be on successive lines, Gardner, a locality such as Batticaloa, followed by a date as Mar. 1856. By combining the unrelated collector and date there results attribution to Gardner a collection made the seventh year after his death.

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The C.P. numbers are not to be considered comparable with collectors' numbers applied in the customary fashion to individual collections made of one taxon at one place at one time. The specimens distributed under one C.P. number may have been collected at various places and times by various collectors. In support of this conclusion is Trimen's (1882) statement quoted above that a numbered series was made up of specimens which had accumulated in the herbarium at Peradeniya and which presumably were there when Thwaites arrived plus subsequent collections by Thwaites and others, e.g., as acknowledged on p. viii in the preface of Thwaites (1864) 'Enumeratio': "I would wish to associate with this little book the names of Harmanis de Alwis Modliar, and of Don Seman de Silva Aratchy, native officers, employed during many years in this establishment, the former as Draftsman, and the latter as principal plant-collector, to whose intelligent and hearty co-operation is due much of my success in procuring new and rare species of plants from the jungles." The attribution of the C.P. numbers on the labels in foreign herbaria to Thwaites is correct, not necessary as indicating that he was the collector, but rather that this was Thwaites' set of exsiccatae of Ceylon plants. Thus understood, to cite, e.g., Thwaites C.P. 591 (K) is different from citing *Thwaites* 591 (K) which should mean that this is Thwaites' own collection number, rather than his *exsiccatae* series number. However, it would be better to cite these numbers as "C.P." without Thwaites' name according to the custom of both Thwaites and Trimen. Livera (1924-5) implies this distinction in his discussion of the origin of a certain specimen of *Sansevieria*: "In the Peradeniya Herbarium there are two sheets labelled *S. zeylanica*. One, from a Kurunegala garden, has no flowers; it bears the C.P. number 2297 and is probably from Thwaites' collection".

The combination of the usual lack of indication of collectors for nearly half a century, plus poor legibility of the dates in the 1850's in the pencilled jottings on the C.P. sheets at Peradeniya has trapped some contributors of MSS for the revised Flora of Ceylon into the grossest errors. Our whipping boy mentioned above in the second paragraph of this article excelled in numbers and types of errors. He attributed collections to Gardner as having been made in 1838, which antedates Gardner's arrival by six years. This double error arose from misreading the "1858" jotted in pencil in the customary position mentioned above, in the vicinity of Gardner's name. This was a double error, because as Gardner died in 1849, the date had no relation to Gardner whether read rightly or wrongly.

Unfortunately, Trimen continued the tradition of omitting the collector. There are numerous sheets collected during Trimen's directorship of the Royal Botanic Gardens, as indicated by the dates, but indication of collectors is rare or perhaps wholly

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lacking. This led to another sort of error by the whipping boy referred to above. By attributing to Thwaites the anonymous collections at Peradeniya made after 1882, the year of Thwaites' death, there were created apparent posthumous collections made by Thwaites. Judging by the handwriting, Trimen labelled some specimens collected after Thwaites' death with the C.P. numbers for the taxa represented, but no collector was specified which accounts for Thwaites' supposed posthumous collections because at least one worker attributed these apocryphal C.P. numbers to Thwaites as collector. The identification of Trimen's handwriting is based on comparison with a sample kindly supplied by Herve M. Burdet, Conservateur, Bibliothèque du Conservatoire botanique de la Ville de Geneve.

The most appalling error made by our whipping boy was that in the *one* case in which he attempted to cite a C.P. number, he had it as "C.V." which is what it often resembles as written, but this error revealed that he was unaware of the famous Ceylon plant series of Thwaites'.

Errors of the sort enumerated above can be avoided easily:

- (1) Anonymous collection should be cited as being without indication of collector.
- (2) Dates must be read correctly and collections must not be attributed to persons either before their arrival in Ceylon or after their death.
- (3) Unrelated associations of names of collectors and dates should not be assumed to be related.
- (4) Authors should be aware of the existence, and nature and importance of Thwaites' Ceylon Plant series.

The author whose multitudinous errors showed the need for this summary is not alone. Other authors have made similar errors, though, so far as seen, fewer. In fact the writer of this article was embarrassed to find a few anachronisms in his own MS when he re-examined it in the light of the facts summarized here.

The following chronology will serve to avoid anachronisms:
George Gardner arrived in Ceylon in 1844; was superintendent of the Royal Botanic Gardens 1844-49; died 10 March 1849.

George Henry Kendrick Thwaites arrived in Ceylon in 1849; was Superintendent of the Royal Botanic Gardens 1849-1857, and Director 1857-1880; died 11 September 1882.

Henry Trimen arrived in Ceylon in 1880; was Director of the Royal Botanic Gardens 1880-1896; died 16 October 1896.

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